WE CLAIM:

1. A method of forming a catheter, comprising:

providing a braid layer having a distal end and a proximal end;

securing a first polymer segment over the braid layer, the first polymer segment being positioned proximal of the distal end of the braid layer, the first polymer segment having a distal end and a proximal end;

cutting through the braid layer at a cutting position proximate the distal end of the first polymer segment and removing a portion of the braid layer that extends distally of the cutting position; and

securing a second polymer segment over the braid layer, the second polymer segment extending over the first polymer segment and extending distally of the cutting position.

2. The method of claim 1, wherein the first polymer segment has a melting point that is at least about 10° F above a melting point of the second polymer segment.

3. The method of claim 1, wherein securing the first polymer segment comprises positioning a heat shrink tube over the first polymer segment and applying sufficient heat and pressure to melt the first polymer segment.

4. The method of claim 1, wherein securing the second polymer segment comprises positioning a heat shrink tube over the second polymer segment and applying

sufficient heat and pressure to melt the second polymer segment but not enough heat to melt the first polymer segment.

5. The method of claim 4, wherein the first polymer segment has a melting point that is greater than about 400° F and the second polymer segment has a melting point that is less than about 400° F.

6. The method of claim 4, wherein the second polymer segment has a melting point that is about 350° F.

7. The method of claim 1, wherein the first polymer segment comprises a polyether-ester elastomer.

8. The method of claim 1, wherein the second polymer segment comprises a acetal resin/polyurethane blend.

9. The method of claim 3, wherein the heat shrink tube comprises a perfluoro (ethylene-propylene) copolymer.

10. The method of claim 4, wherein the heat shrink tube comprises a perfluoro (ethylene-propylene) copolymer.

11. The method of claim 1, wherein the second polymer segment comprises in combination a proximal segment configured to overlay the braid layer, an intermediate segment configured to overlay the first polymer segment, and a distal segment configured to form a distal tip.

12. The method of claim 1, wherein providing the braid layer comprises providing an inner lubricious liner positioned within the braid layer, and wherein cutting through the braid layer further comprises cutting the inner lubricious liner.

13. The method of claim 1, wherein providing the braid layer comprises providing a braid layer that extends sufficiently distally of the cutting position to substantially prevent braid flaring at the cutting position.

14. The method of claim 1, wherein providing the braid layer comprises providing a braid layer that extends distally of the cutting position and wherein providing the braid layer further comprises securing the distal end of the braid layer to substantially prevent braid flaring at the cutting position.

15. A guide catheter comprising a braid layer and an outer polymeric layer, the braid layer and the outer polymeric layer each having a distal end and a proximal end, the guide catheter being produced by the process of:

securing a first polymer segment over the braid layer, the first polymer segment being positioned proximal of the distal end of the braid layer, the first polymer segment having a distal end and a proximal end;

cutting through the braid layer at a cutting position proximate the distal end of the first polymer segment and removing a portion of the braid layer that extends distally of the cutting position; and

securing a second polymer segment over the braid layer, the second polymer segment extending over the first polymer segment and extending distally of the cutting position, the second polymer segment forming the outer polymeric layer.

16. The guide catheter of claim 15, wherein the first polymer segment has a melting point that is at least about 10° F above a melting point of the second polymer segment.

17. The guide catheter of claim 15, wherein securing the first polymer segment comprises positioning a heat shrink tube over the first polymer segment and applying sufficient heat and pressure to melt the first polymer segment.

18. The guide catheter of claim 15, wherein securing the second polymer segment comprises positioning a heat shrink tube over the second polymer segment and applying sufficient heat and pressure to melt the second polymer segment but not enough heat to melt the first polymer segment.

19. The guide catheter of claim 15, wherein the first polymer segment comprises a polyether-ester elastomer having a melting point of greater than about 400° F.

20. The guide catheter of claim 15, wherein the second polymer segment comprises an acetal resin/polyurethane blend having a melting point that is about 350° F.

21. The guide catheter of claim 17, wherein the heat shrink tube comprises a perfluoro (ethylene-propylene) copolymer.

22. The guide catheter of claim 18, wherein the heat shrink tube comprises a perfluoro (ethylene-propylene) copolymer.

23. The guide catheter of claim 15, wherein the second polymer segment comprises a proximal segment configured to overlay the braid layer, an intermediate segment configured to overlay the first polymer segment, and a distal segment configured to form a distal tip.

24. The guide catheter of claim 15, wherein providing the braid layer comprises providing an inner lubricious liner positioned within the braid layer, and wherein cutting through the braid layer further comprises cutting the inner lubricious liner.

25. The guide catheter of claim 15, wherein providing the braid layer comprises providing a braid layer that extends sufficiently distally of the cutting position to substantially prevent braid flaring at the cutting position.

26. The guide catheter of claim 15, wherein providing the braid layer comprises providing a braid layer that extends distally of the cutting position and wherein providing the braid layer further comprises securing the distal end of the braid layer to substantially prevent braid flaring at the cutting position.

27. The guide catheter of claim 15, wherein the braid layer comprises high tensile stainless steel.

28. A guide catheter having a distal end and a proximal end, the guide catheter comprising:

an inner lubricious layer extending proximally from a position proximal of the distal end of the catheter;

a reinforcing braid layer extending proximally from a position proximal of the distal end of the catheter;

an outer polymeric layer extending proximally from the distal end of the catheter; and

a braid securement segment extending proximally from a position proximal of the distal end of the catheter, the braid securement segment having a melting point that is

lower than a melting point of the inner lubricious layer but higher than a melting point of the outer polymeric layer;

wherein the braid securement segment is melted into the braid layer, thereby preventing braid flaring during processing.

29. The guide catheter of claim 28, wherein the first polymer segment has a melting point of greater than about 400° F and the second polymer segment has a melting point that is less than about 400° F.

30. The guide catheter of claim 28, wherein the second polymer segment has a melting point that is about 350° F.

31. The guide catheter of claim 28, wherein the first polymer segment comprises a polyether-ester elastomer.

32. The guide catheter of claim 28, wherein the second polymer segment comprises a acetal resin/polyurethane blend.

33. The guide catheter of claim 28, wherein the second polymer segment comprises a proximal segment configured to overlay the braid layer, an intermediate segment configured to overlay the first polymer segment, and a distal segment configured to form a distal tip.

34. The guide catheter of claim 28, wherein the braid layer comprises high tensile stainless steel.